

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Replacement of Part 90 by Part 90.1
Revise the Private Land Mobile Radio
Services and Modify the Policies
Governing Them

FEDERAL MAIL BRANCH PR Docket No. 92-235

COMMENTS OF RITRON, INC.

RITRON, INC. (hereinafter "Ritron") respectfully submits these Comments in response to the Notice of Proposed Rule Making ("NPRM").

We believe Part 88 in its current form should not be adopted by the Commission because of the extreme economic harm it would cause. It would render ineffective billions of dollars worth of private radio communications equipment, eliminate a simple and low-cost means of radio communications, promote monopolistic control for a few radio suppliers, and totally disregard the interests of private radio communications users. We recommend modifications to Part 88 so that it could be released to improve radio communications services with more reasonable economic effects.

Ritron is the pioneer of low-cost radio communications equipment for first-time users of Low Power and Itinerant ("LPI") private radio frequencies. Over time, other companies have followed suit, even adopting our innovative use of "color dots" to identify each of the LPI frequencies. Other products include full featured mobile and portable transceivers, radio repeaters, OEM modules and telemetry equipment. We take special pride in the fact that all of our radios are manufactured in the United States of America. Our comments are a result of our discussions with many of our representatives, dealers and customers.

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Premature Obsolescence

The major technical flaw in Part 88 is its failure to understand the havoc that it would create by changing the transmitter deviation of existing systems and introducing new technology users on interstitial channels as early as January of 1996. Many existing systems will not work if their transmitter deviations are reduced from 5 to 3 KHz. Others may be reduced to marginal performance. This is due to the requirements of sub-audible and other signalling methods and voice band signal to noise ratios.

Additionally, the new technology channels will encroach on the receiver intermediate amplifier passbands of many existing transceivers. This will result in either greatly reduced range or complete signal blocking if they cause interference with noise-squelch systems. The FCC would be inundated by public complaints of interference from these new digital radio systems.

Industry experts estimate that the existing installed base of land mobile 2-way radio equipment affected by this NPRM represents a 25 billion dollar investment. The majority of this equipment is owned by American business (e.g. surveyors, building contractors, delivery companies, security companies, etc.) If the NRPM actually becomes rule, the current installed base of radio equipment will become obsolete in 1996, despite the fact that radio equipment typically has a useful life of 10-15 years.

This investment in professional land-mobile radio systems represents a large part of our nation's communication infrastructure. This infrastructure is as important to America as bridges and roads. Just as the Federal Government shouldn't destroy a bridge and place the burden of its replacement on private organizations, it should not destroy the investment in private 2-way radio. In these uncertain economic times, the last thing American businesses, cities, counties, and states need is the Federal Government acting hastily and obsoleting 25 billion dollars of perfectly good communications equipment.

It is a reprehensible and narrow-minded attempt at rulemaking given the fact that this proposal was drafted without an economic impact study to consider these effects.

Elimination of Low Cost Entry Level Systems

Currently, an entry level 2-way radio costs the end user less than \$200 per unit. There are hundreds of thousands of these radios in use on just a few frequencies in what must be one of the most efficient uses of radio spectrum. Two-way radios based on not yet perfected new technologies will cost three to four times as much as present equipment.

It is significant that the first Part 88 full power SMR "Innovative Use Shared Frequency" within the bandwidth of a conventional wideband receiver (used in these LPI radios) could render a wideband LPI channel unusable for an entire community.

The small business owner, largely responsible for employment growth over the past decade, will be hit hard by the elimination of this service.

As an example, consider John, a sole proprietor and employee of a small cable television installation and maintenance sub-contractor. John's customers are mostly apartment and office buildings.

John was unable to provide service at an attractive price because of his overhead costs. He attributed this to the time he spent going back and forth between the master antenna site and the cable subscriber outlets.

Realizing his obvious problem was wasted time between sites, John purchased three low cost LPI portable radios for less than \$150 each and hired a new employee, Jane Doe. Now that there is communications with one another, Jane stays at the master antenna site, makes any necessary adjustments and documents the work. Meanwhile John goes directly from outlet to outlet.

They leave the third radio at the customer's office so they can be contacted on location and solve any problems immediately. John and Jane are able to perform the same work in much less than half the time it took John alone.

In addition to eliminating wasted time and adding to the nation's workforce, John's company greatly improved on-the-job safety and customer service.

Under Part 88, John would lose the use of those LPI radios because his radio system would be inoperable because of interference from high powered, narrowband systems on, or adjacent to, his channel. His only alternative would be to pay more than \$600 per unit for new radios, plus monthly access and use charges! Faced with that additional expense, John could go out of business and add two more people to the ranks of the unemployed.

By adopting Part 88, the Commission would inhibit job creation. By increasing the cost of basic communications, Part 88 places an additional burden on small businesses where most new jobs in the economy are created.

Further, it is in the interest of the public that there is such a low cost means to discover the value of non-consumer radio communications equipment. Users of these systems generally move up to full-featured systems as their business grows.

This affects more than just cable TV installers. Hospitals, neighborhood watch groups, schools, retailers, and road crews, surveyors and similar occupations all operate on LPI radios.

In definition, these entities are a wide variety of American businesses and institutions. They include (but are not limited to) schools, medical services, construction trades, rescue organizations, home/office repair, veterinarians, disaster relief organizations, manufacturers, retailers, and churches.

In size, they range from large corporations like Wal-Mart and McDonald's who use tens of thousands of radios nationwide, to small organizations involving just two people operating radios within a couple of thousand feet.

LPI frequencies and low cost two-way radios are ideal for these types of organizations. Limited to two Watts of power, radios are generally a handheld type. Their area of operation is usually one mile or less, typically a job site, campus, building, or event. Their low cost allows a geometrically larger number of organizations who previously could not

afford two-way radios to realize better cost effectiveness, improved safety, productivity and public service.

To see the best growth of radio communications and the maximum benefit to the public, these simple, low-cost, entry level systems should be promoted.

Regrettably, a large majority of these users will not be heard by the Commission because they are busy making America work and their comments have not been requested. Additionally, despite the best efforts of companies like Ritron, Motorola and others who have attempted to educate and encourage first time users to obtain an F.C.C. station license, we believe that only a few percent of LPI systems ever get licensed. This is primarily the Commission's fault. Its rules and regulations enrich coordinators instead of serving the public good. No reasonable business owner expects to spend \$100 to \$150 to license a \$300 dollar radio system.

Monopolies Promoted

The NPRM is anti-competitive. We believe the large equipment suppliers and access service providers welcome the exclusionary or monopolistic opportunities of Part 88. It fosters technology that will lead to "closed system formats" that will essentially lock-in a radio user to a single manufacturer from his first purchase. They see a bonanza in new equipment sales and add-ons without competition. The closed nature of these new technologies will limit competitive solutions to America's communications needs

Under Part 88, radio users who need reliable, wide-area coverage will be forced to contract with a centralized system using these closed system technologies and pay high monthly charges. These service providers see the potential to drive private radio users to pay hundreds of millions of dollars in annual air-time charges.

Recommendations

Part 88 must be modified in the best interests of the users of private radio frequencies. We recommend:

1) The Commission should delay action until resolution of HR-707 legislation. If passed the newly available spectrum could be used by new innovative use technologies and this could delay the need to extensively re-farm the existing spectrum.

2) To avoid immediate harm to users of existing systems, delay the deviation reduction of current systems until the year 2004 and then initially authorize only one low power interstitial channel between existing channels.

This will allow users of recently purchased equipment to get the use they expected. Manufacturers can also make design changes so that equipment sold in the meantime will better reject new interstitial channels.

On the next page where spectrum is not sufficient to satisfy the demand

5) The Commission should require that all transceivers accepted for use under Part 88, be programmable for a common non-proprietary public standard narrowband modulation type for mobile to mobile communications. Additionally, transceivers must be programmable to transmit and receive conventional wideband voice emissions with EIA-220 Continuous Tone Code Subaudible Squelch. A non-proprietary trunking format should also be considered.

It was wise that the Commission found it in the public interest to allow cellular systems to use new and innovative non-standard technologies yet require interoperability with standard analog service.

6) Allow trunking at 450-470 MHz. There are many immediate and relatively low cost solutions to retrofit trunking functions to existing radios. This can quickly result in better spectrum utilization.

In conclusion, we recognize that new technologies can improve the utilization of the radio spectrum but that they should be applied with a better consideration of both long and short term costs and benefits.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "E. W. Rice III", with a stylized flourish at the end.

E. W. Rice III

President

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